

Climate Change: What technology companies should know

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Over the last five years, the world has turned much of its attention to the issue of climate change. Consumers are concerned about the effects of greenhouse emissions on their health and that of the planet. For businesses, the challenge is to capitalize on the transition to a low-carbon economy, whether by their own choice or through regulations imposed by the states or the federal government. Great uncertainty exists among companies, however, on how best to proceed with and leverage new climate-friendly business models and operations.

Early efforts to reduce a company's carbon footprint usually center on how to optimize existing energy use and how to implement alternative sources of energy such as nuclear, wind, solar and geothermal. More proactive companies have also begun to consider developing new products and business models to seize on the opportunities that result from lowering carbon emissions.

Your company may be in the process of strategizing and developing climate change initiatives, a complex subject to be sure. While climate change can offer profitable business opportunities for your organization, it can also present significant risks that require holistic management across an enterprise. For example, if your company is involved in the manufacturing and powering of computers and networks, it is likely that you produce a high level of greenhouse gas emissions. Data centers, in particular, are under scrutiny for their rapidly growing carbon footprint. Electronics and medical device manufacturers face the environmental and human factor risks stemming from waste disposal during production. The technology sector overall is one of the biggest users of an energy-intensive transportation and supply chain network, where components are often shipped from dozens of factories overseas to final assembly here in the U.S.

As a technology company, it is critical to get ahead of climate change issues that can have a strategic impact on your market resilience and growth. To provide guidance in this area, Zurich has developed a Climate Change Business Solutions Matrix that categorizes climate change issues into eight distinct pillars. While not every pillar may be applicable to your company, we have outlined here the five that could be most relevant to a technology business:

1. Green design for buildings and products

Green or sustainable building design as determined through LEED (Leadership in Energy and Environmental Design) certification measures building performance in terms of energy savings, water efficiency, carbon dioxide, emissions reduction, indoor air quality, resource management and overall impact to the environment. For example, the use of foam roofing materials, energy efficient lighting, and low “e” windows can increase your building’s energy efficiency. In addition, alternative energy sources such as photovoltaics and fuel cells reduce energy costs for a company as well.

Because of the innovative nature of their business, many technology companies are building or retrofitting to green standards. Green building may cost more initially, but over the life of the building can positively affect your company’s bottom line through lower operating costs and a better work environment for employees. Additionally, your business may benefit from an improved reputation and increased sales by presenting a positive, greener image that resonates with today’s environmentally conscious consumers and shareholders.

Complementary to green building initiatives, green product design involves the development of products that are energy/resource efficient or carbon neutral. One example is the new types of fluorescent light bulbs that are being created to offer consumers lower-cost electricity options. Cars are also being redesigned toward fuel efficiency and lower maintenance requirements. Some manufacturers are developing “smart technology” equipment that will operate during times when energy prices are at their lowest cost. Many traditional technology companies are expanding their product development into green product design as well.

2. Supply Chain - Purchasing and distribution management

An enormous opportunity waits for technology companies to cut transportation costs and reduce carbon emissions through better supply chain management. If this is a goal for your company, a first step to consider is setting low-carbon standards for your suppliers and contractors, similar to how cost and quality performance metrics are now developed. Another step is to look for more efficient means of transportation, including consolidating routes for the fleet and even reducing employee commuting by promoting work at home programs.

3. Energy and commodities management

Reducing the costs and environmental impact of energy consumption is a critical task for technology companies. Lighting, HVAC systems, water usage, insulation—the list of power generation alternatives and commodities to analyze, select and improve is long. Beyond saving money for your company, the benefits of reducing energy and maintenance costs may include increasing your company’s reputation, creating a market differentiator with green efforts and reducing your overall carbon footprint.

4. Carbon management

You have probably heard a lot of talk in the media around the issue of measuring a company’s carbon footprint in order to gauge its specific impact on the environment. Voluntary carbon offset programs allow companies to mitigate their own greenhouse gas emissions from transportation, electricity use, and other sources. Pending federal cap-and-trade legislation could impose limits on carbon emissions, and require your company to purchase carbon credits if you go above your limit.

5. Manufacturing waste stream management and disposal

Minimizing manufacturing waste is not only good for the environment, but it can also positively affect a company's bottom line. As landfills close and new ones become more difficult and expensive to open, disposal costs will rise for manufacturers. The more materials that are wasted during production, the more costs rise. Additionally, better management of manufacturing waste can also improve worker safety and create a more positive public image.

Both environmental and human health risks are a concern here, especially with the new legislative and regulatory initiatives being proposed by the Obama Administration. The benefits of improving your company's disposal management include "reducing product liability, improving a product's life cycle, and enhancing the public's perception of a company."

Climate change opportunities: managing the risks

A technology company like yours is likely facing attractive climate change opportunities such as:

- Going "green" through modifying your building, operations or products to be more attractive to consumers and investors
- Reducing your transportation costs through better "green" supply chain management
- Making your company's facilities more energy efficient through better use of existing sources or alternative ones such as solar and geothermal
- Measuring your company's carbon footprint and reducing it through smart carbon management
- Creating more environmentally-friendly disposal of your company's waste, including the ultimate disposal of your product by the end user

These "green" opportunities and others can present a company like yours with potential risks. To help companies like yours manage these climate change challenges, Zurich offers its Climate Change Business Dynamics services. We can help identify the specific actions your company can take to both minimize the negative effects of climate change, and profitably capitalize on new market opportunities.

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